

## RELATIVE HUMIDITY.

The percentage of mean relative humidity for the month ranges as follows: New England, from 70 to 88; Middle Atlantic states, 65 to 82; South Atlantic states, 69 to 81; East Gulf states, 72 to 80; West Gulf states, 73 to 82; Rio Grande valley, 73 to 86; Ohio valley and Tennessee, 71 to 80; Lower Lake region, 72 to 78; Upper Lake region, 70 to 82; extreme Northwest 67 to 75; Upper Mississippi valley, 69 to 81; Missouri valley, 73 to 76; Northern Slope, 54 to 79; Middle Slope, 49 to 76; Southern Slope, 57 to 78; Southern Plateau, 30 to 70; Middle Plateau, 38 to 56; Northern Plateau, 59 to 80; North Pacific region, 80 to 83; Middle Pacific region, 59 to 74; South Pacific region, 51 to 70.

## WINDS.

The prevailing winds during the month of October, 1881, at Signal Service stations, are shown on Chart No. II, by arrows, which fly with the wind. In the South Atlantic and East Gulf states and in the Florida Peninsula, *northeasterly*, in the Middle Atlantic states and New England, *south to west* and *northwest*; in the Lake region, *southeast to southwest*; throughout the Mississippi and Ohio valleys and in Texas, *southerly*; in the Upper Missouri valley and the Rocky Mountain regions, *northerly*; in the Plateau regions and along the Pacific coast, *south to west*.

*Total Movements of the Air.*—The following are the largest total movements at Signal Service stations: Mt. Washington, 30,501 miles; Delaware Breakwater, 12,222; Portsmouth, N. C., 11,881; Wood's Holl, Mass., 11,463; Cape May, N. J., 11,256; Hatteras, N. C., 11,199; Kittyhawk, N. C., 11,094; Chincoteague, Va., 11,054; New Shoreham, R. I., 11,052; Port Eads, La., 10,358; Thatcher's island, Mass., 10,176; North Platte, Neb., 9,839; Dodge City, Kan., 9,824; Indianola, Tex., 9,809; Sandy Hook, N. J., 9,727; Sandusky, Ohio, 9,257; Barnegat, N. J., 9,120; Ft. Sill, Ind., Tyr., 9,084; Macon, N. C., 8,898; Cape Henry, Va., 8,659; Galveston, Tex., 8,575; Ft. Elliott, Tex., 8,498; Champaign, Ill., 8,263; Moorehead, Minn., 8,052. The *smallest* are: La Mesilla, N. M., 1,217; Lewiston, Idaho, 1,451; Lynchburg, 1,457; Silver City, N. M., 1,470; Uvalde, Tex., 1,743; Florence, Ariz., 1,778; Roseburg, Oreg., 1,915; Visalia, Cal., 2,285; Yuma, Ariz., 2,400; Laredo, Tex., 2,516; Dayton, Ohio, 2,587; Missoula, Mont., 2,677; Washington, D. C., 2,780; Tuscon, Ariz., 2,839; Memphis, Tenn., 2,846.

*High Winds.*—On summit of Mt. Washington a maximum velocity of 160 miles, *northwest*, was recorded on the 16th, and for five minutes, the register showed a velocity of 200 miles per hour. These are the highest velocities ever recorded at this station. Velocities of 100 miles per hour, and over, were recorded on the following dates: 5th, 15th, 16th, 26th, 27th. Stations reporting velocities exceeding 50 miles per hour, are as follows: Kitty Hawk, 60, NE., 5th; Portsmouth, N. C., 56, NE., 5th; Cape Henry, Va., 56, NW., 25th; Bismarck, Dak., 55, NW., 31st; North Platte, Neb., 54, S., 1st; Delaware Breakwater, 52, N., 5th; and Hatteras, N. C., 52, NE., 5th.

*Local Storms.*—The month of October is quite remarkable for the small number of this class of storms reported. Shawano, Wis., 8th, very violent storm, blowing down trees and fences and unroofing buildings; path of storm about one mile wide; for many miles acres of forest were perfectly leveled, and in many respects the storm's path appeared as if it had been swept by fire. Knox Co., Ohio, 2d, terrific wind storm swept over the country during the afternoon, demolishing outbuildings and fences and uprooting trees. Wanton, Wis., 4th, terrible tornado swept down the valley of Wisconsin river, completely devastating a portion of the country 80 rods wide by about 6 miles in length; houses, barns, outbuildings and grist mills demolished. Rochester, N. Y., 17th, 8.30 p. m., tornado with funnel-shaped cloud passed over a small portion of the city, accompanied by a loud roaring noise; trees were uprooted and buildings damaged. Schuyler Co., Ill., 8th, terrific tornado, lasting five minutes, and leveling everything in its path; the village of Camden, containing several hundred inhabitants, had every house with the exception of two destroyed; loss to farmers in the vicinity, \$15,000. Menominee Co., Mich., 8th, tornado passed over the upper waters of the north branch of Pike river, cutting a path through the forest two miles wide and 12 miles in length; hardly a tree was left standing in the path of the storm; it is estimated that 100,000,000 feet of pine was prostrated. Tallahassee, Fla., 28th, tornado passed over the town, unroofing buildings and causing much other damage; a heavy fall of hail accompanied the storm. Cheyenne, 12th, very heavy storm of sleet and wind, prostrating all overland telegraph lines and committing other damage.

## VERIFICATIONS.

*Indications.*—The detailed comparison of the tri-daily indications for October, with the telegraphic reports for the succeeding twenty-four hours, shows the general percentage of verifications to be 84.3 per cent. The percentages for the four elements are: Weather, 88.7; Direction of the Wind, 79.2; Temperature, 86.4; Barometer, 82.9 per cent. By geographical districts they are: For New England, 85.1; Middle Atlantic states, 85.5; South Atlantic states, 87.2; Eastern Gulf states, 90.2; Western Gulf states, 87.8; Lower Lake region, 85.6; Upper Lake region, 81.3; Tennessee and the Ohio valley, 84.2; Upper Mississippi valley, 80.9; Lower